

ABSTRACT OF THE DISCLOSURE

A method and structure for a complementary metal oxide semiconductor active pixel sensor device having a photodetector, a sensing node electrically connected to the photodetector, an output connected to the photodetector, and a voltage-independent capacitance device connected between the sensing node and the output. The voltage-independent capacitance device provides a capacitance independently of a voltage on the sensing node. The voltage-independent capacitance device can be a voltage-independent capacitor, an electrode-electrode capacitor, or a common source amplifier and should have a capacitance larger than the capacitance of the sensing node. The voltage-independent capacitance device lowers an overall voltage-dependent capacitance of the APS.

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